

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	15910
<b>Description:</b> Crosstube Extrusion ( 407 aft )	<b>Part Number:</b>	D6011-115
<b>Drawing:</b> D6011 Rev. A	<b>Qty:</b>	8/9

Step	Location	Procedure	By	Date	qty
1	EXPEDITING	Open W/O	SM	01.12.11	8
2	PURCHASING	Issue P/O: <u>2004012</u> a) Order as per Dwg D6011 b) Material: 2.750 x 0.650 wall 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) seamless alum tube c) Minimum ultimate tensile strength = 77 ksi d) Minimum tensile yield strength = 66 ksi e) Tolerance are per ASTM B210 (see details on Dwg D6011) f) <b>Material certification required</b>	U	01-12-12	8
3	RECEIVING	Receive and Inspect for transit damage <b>Ensure Material certification is attached</b>	PL	02/01/24	10
15	QC	Inspect Level 6 <b>Ensure Material certification comply to Dwg</b>	BE	02.07.05	9
84	FINISHING	Chemical conversion coat as per QSI 005 4.1	SD	02-06/13	9
6	STORES	Identify and Stock	BE	02.07.05	9
7	EXPEDITING	Close W/O Cost / part <u>1048.85</u> <u>02/01/08</u> (9)	SM	02/07/08	

Rev	Date	Change	Revised By	Approved
A	01.08.17	New Issue	SM	E

RELEASED

01.08.17

1 BAD

49.8 lbs e2?  
5/11 56.1  
500 lbs = 8 pcs.  
467.50 e2.



Work Order:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Manuf / Design Mgr	Approval QC Inspector

NCR		WORK ORDER NON-CONFORMANCE						
DATE	STEP	Description of NC section A	Corrective Action Section B		Sign & Date	Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial					

PAR#: \_\_\_\_\_ Fault Category: \_\_\_\_\_ DQA: \_\_\_\_\_ Date: \_\_\_\_\_

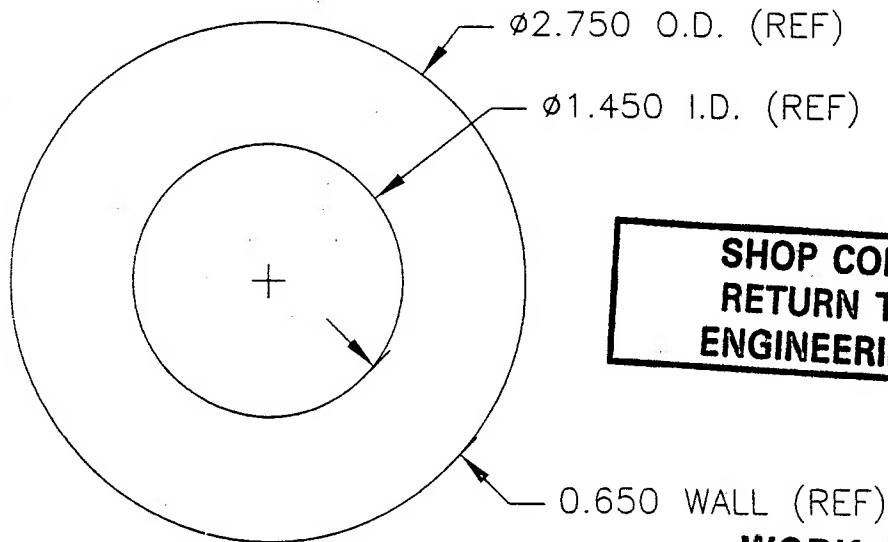
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



DESIGN #	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D6011	REV. A SHEET 1 OF 1
DATE 01.08.16		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	01.08.16	NEW ISSUE	

## SPECIFICATION CONTROL DRAWING

RELEASED  
01.08.17 #



SHOP COPY  
RETURN TO  
ENGINEERING

### NOTES

- 1) D6011-XXX CROSSTUBE  
LENGTH

WHERE XXX IS LENGTH IN INCHES  
EG. 115" LONG TUBE: D6011-115

WORK ORDER  
NO. 15990

**CONTROLLED COPY**

- 2) MATERIAL: 2.750 OD x 0.650 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.  
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi  
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:  
O.D.:  $\pm 0.006$  MEAN ( $\pm 0.012$  INCLUDING OVALITY)  
WALL:  $\pm 0.020$  MEAN ( $\pm 0.065$  INCLUDING ECCENTRICITY)  
LENGTH: XXX  $+0.125/-0.000$   
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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# BA TUBES LIMITED

Studley Road, Redditch, Worcester B98 7HN, England  
Telephone (01527) 484500, Facsimile (01527) 484501



## Approved Certificate

BSEN ISO 9002 Registration No. FM 10669  
CAA Approved Reference No. DMAA 1218  
BAe Approval No. BAE/AG/30275/MAA

Customer Copy No. 94865/1

<b>Customer</b>  DART AEROSPACE LIMITED 1270 ABERDEEN STREET HAWKESBURY ONTARIO CANADA K6A 1K7	<b>Your Order No</b> : 2094012 <b>Our Order No</b> : 81502/3 <b>Packing Note No</b> : 94271 <b>Date</b> : 27 Mar 2002 <b>Packages</b> : 1 CASE	<b>Other Tests Passed</b>
	<b>Size / Description</b>  SEAMLESS EXT TUBE 69.850MM O/D 16.510MM W/T 7075 Alloy Length - 3286.00 mm	

No of Pieces	Nett Weight Lbs	Insp. Stamp R.A.R.	Tensile Test				Chemical Analysis %														H cc/ 100gm
			Lot or Test No.	0.2% Proof Stress KSI	Tensile Strength KSI	% Elongation 4 x Dia	Cast No.	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn					Ti	
10	571	19	219315	74.1	90.21	11	2G338	.10	.30	1.40	.08	2.30	.19		5.59					.03	.13

**Remarks** DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY  
CASE NO. B6125

Certified that the whole of the supplies detailed hereon have been inspected, tested and unless otherwise stated, conform in all respects with the requirements of the contract or order. The quality control adopted in respect of these supplies are in accordance with the conditions of our BSEN ISO 9002 registration.

For and on behalf of BA Tubes Limited

Certified that, unless otherwise stated above the whole of the above-mentioned materials have been manufactured, tested and inspected in accordance with the terms of the contract order acceptable thereto and conform fully to the standard/specifications quoted hereon and the requirements of the Civil Aviation Authority

For and on behalf of BA Tubes Limited

Registered in England No. 3981395  
Registered Office: The Victoria, Harbour City, Salford Quays, Manchester M5 2SP, England.  
T Registration No. GB 668 2142 26

( THIS CERTIFICATE CONFORMS TO THE REQUIREMENTS OF EN 10204.3.1B )



DART AEROSPACE LTD		Work Order:	18980
Description: REMOVE PER NCR 656		Part Number:	D6010-115 (7) D6011-115 (1) D6007-106 (1)
Dwg:		Qty:	
		Page 1 of 1	

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveller			
2	FINISHING	REMOVE THE FOLLOWING PARTS FROM QUARANTINE:	J	03.03.11	9
3		(7) D6010-115 B15989*			
4		(1) D6011-115 B15990*			
5		(1) D6007-106 B15998*			
6		*NOTE: PARTS WILL BE ASSIGNED A NEW B/N. PLEASE REFER TO THESE B/N FOR RECEIPT OF ORDER AND MATERIAL CERTIFICATION.			
7	FINISHING	ACID ETCH + ALUMINE INSIDE + OUTSIDE PER QSE COS 4.1	J	03.04.11	9
8	FINISHING	IDENTIFY WITH PIN + NEW B/N + STOCK ATTACH NCR 656 TAG WHICH SAYS THE FOLLOWING:	J	03.04.11	9
9		"SEE NCR 656.			
10		ULTRASONIC INSPECT AFTER TURNING.			
11		TALK TO DAVID SHEPHERD BEFORE MACHINING			
12	AC	LOST / PART 12Y.25			
13		ADJUST INVENTORY AS REQUIRED	SAC	03.04.11	-
14	DC	CLOSE w/o INSPECT LEVEL 21	J	03.04.11	-
15					
16					
17					
18					
19					
20					

Rev	Date	Change	Revised By	Approved
A		New issue	J	03.03.11

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Dec 10, 2001  
07:39 am

Work Order No	: 0015990	Department Code:	
Project Name	: D6011-115	Burden Flags	: NNNNNNNN
Project For	: WK15	WO Status	: Open
Work Order Type	: Main	Invoice State	: Not Invoiced
Main WO Number	:	Invoice Date	:
House Part Number	: D6011-115	Invoice Number	:
Description	: Crosstube Material	Invoice Amount	: 0.00
Manufactured	: Yes		
Amount Req'd	: 8	Order Entry No	:
Amount Done	: 0	OE Value	: 0.00
Start Date	:		
Est Finish Date	: 04-05-02	Est Margin	: 0.000%
Act Finish Date	:	Actual Margin	: 0.000%
Drawings Req'd	: No		
Ok for Approval	:		
Approval Rec'd	:	\$0 Posted to Finished Goods	

	Estimated	Actual	Var. %	Posted	To Post
Material Cost	0.00	0.00	0.00	0.00	0.00
Engineering Hours	0.00	0.00	0.00		
Engineering Cost	0.00	0.00	0.00	0.00	0.00
Production Hours	0.00	0.00	0.00		
Production Cost	0.00	0.00	0.00	0.00	0.00
Packaging Hours	0.00	0.00	0.00		
Packaging Cost	0.00	0.00	0.00	0.00	0.00
OverHead Hours	0.00	0.00	0.00		
OverHead Cost	0.00	0.00	0.00	0.00	0.00
CNC Hours	0.00	0.00	0.00		
CNC	0.00	0.00	0.00	0.00	0.00
Misc. Hours	0.00	0.00	0.00		
Misc.	0.00	0.00	0.00	0.00	0.00
=====					
Burden	0.00	0.00	0.00		
=====					
Total Cost	0.00	0.00	0.00		
Margin	0.000	0.000			
Selling Cost	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done	0.00	0.00
Profits/(Loss)	0.00	0.00